CLAIMS

1   1.   A method for managing data traffic through a network, the data traffic comprised

2   of a plurality of microflows, the method comprising:

3   determining a capacity of a buffer containing a microflow based on a characteristic;

4   assigning an acceptable threshold value for the capacity of the buffer over a

5   predetermined period of time;

6   delegating a portion of available bandwidth in the network to the microflow; and

7   using the buffer for damping jitter associated with the microflow.

1   2.   The method of claim 1, further comprising assigning a data rate value for the

2   microflow to travel through the network.

1   3.   The method of claim 2, wherein the data rate value and the characteristic

2   corresponds with guaranteed rate traffic.

1   4.   The method of claim 2, wherein the data rate value and the characteristic

2   corresponds with maximum rate traffic.

1   5.   The method of claim 2, wherein the data rate value and the characteristic

2   corresponds with available rate traffic.

1   6.   The method of claim 1, wherein the characteristic is a traffic characteristic.

1   7.   The method of claim 1, wherein delegating the portion of available bandwidth

2   further comprises dynamically setting a weighting factor to partition a bandwidth allocation for

3   the microflow.

1   8.   The method of claim 1, further comprising setting a packet discard time limit.

1   9.   The method of claim 1, wherein the characteristic includes a microflow burst.

1   10.   A system for managing data traffic through a network, the data traffic comprised

2   of a plurality of microflows, the system comprising:

3   a means for determining a capacity of a buffer containing a microflow based on a

4   characteristic;

5   a means for assigning an acceptable threshold value for the capacity of the buffer over a

6   predetermined period of time;

7   a means for delegating a portion of available bandwidth in the network to the microflow;

8   and

9   a means for using the buffer for damping jitter associated with the microflow.

1   11.   The system of claim 10, further comprising a meansfor assigning a data rate value

2   for the microflow to travel through the network.

1   12.   The system of claim 11, wherein the data rate value and the characteristic

2   corresponds with guaranteed rate traffic.

1   13.   The system of claim 11, wherein the data rate value and the characteristic

2   corresponds with maximum rate traffic.

1   14.   The system of claim 11, wherein the data rate value and the characteristic

2   corresponds with available rate traffic.

1   15.   The system of claim 10, wherein the characteristic is a traffic characteristic.

1   16.   The system of claim 10, wherein the means for delegating the portion of available

2   bandwidth further comprises a means for dynamically setting a weighting factor to partition a

3   bandwidth allocation for the microflow.

1   17.   The system of claim 10, further comprising a means for setting a packet discard

2   time limit.

1   18.   The system of claim 10, wherein the characteristic includes a microflow burst.

1   19.   In a network management system for controlling data traffic through a network,

2   the data traffic comprised of a plurality of microflows, a microflow classification structure to

3   determine data traffic type comprising:

4   a packet discard time substructure configured to provide a time value to ensure buffer

5   capacity for a microflow;

6   a weighting factor substructure configured to partition available bandwidth among the

7   plurality of microflows to be transmitted through the network; and

8   a delay variation substructure configured to provide a buffer value to dampen jitter in a

9   transmission of the microflow.

1   20.   The microflow classification structure of claim 19, wherein the packet discard

2   time substructure is configured to address a burst size of a microflow.

1   21.   The microflow classification structure of claim 19, wherein the packet discard

2   time substructure, the weighting factor substructure, and the delay variation substructure are

3   quality of service descriptors.

1   22.   The microflow classification structure of claim 19, wherein at least of the wherein

2   the packet discard time substructure, the microflow timeout period substructure, the weighting

3   factor substructure, and the delay variation substructure is used to determine a behavior of a

4   microflow.

1   23.   The microflow classification structure of claim 21, wherein a behavior of the

2   microflow can be characterized as one from a group comprising an available rate traffic, a

3   maximum rate traffic, and a guaranteed rate traffic.

1   24.   The microflow classification structure of claim 19, wherein the packet discard

2   time substructure comprises a value of less than 500 milliseconds.

1   25.   The microflow classification structure of claim 19, wherein the weighting factor

2   substructure comprises a value of zero.

1   26.   The microflow classification structure of claim 19, wherein the weighting factor

2   substructure comprises a value comprised of a percentage of available bandwidth in the network.

1   27.   The microflow classification structure of claim 19, wherein the buffer value for

2   the delay variation substructure is a time value less than 200 milliseconds.

1   28.   The microflow classification structure of claim 19, further comprising a

2   microflow timeout period substructure configured to provide a predetermined value for a

3   duration to detect a microflow termination;

1   29.   The microflow classification structure of claim 28, wherein the predetermined

2   value for the microflow timeout period substructure comprises is less than 32 seconds.